



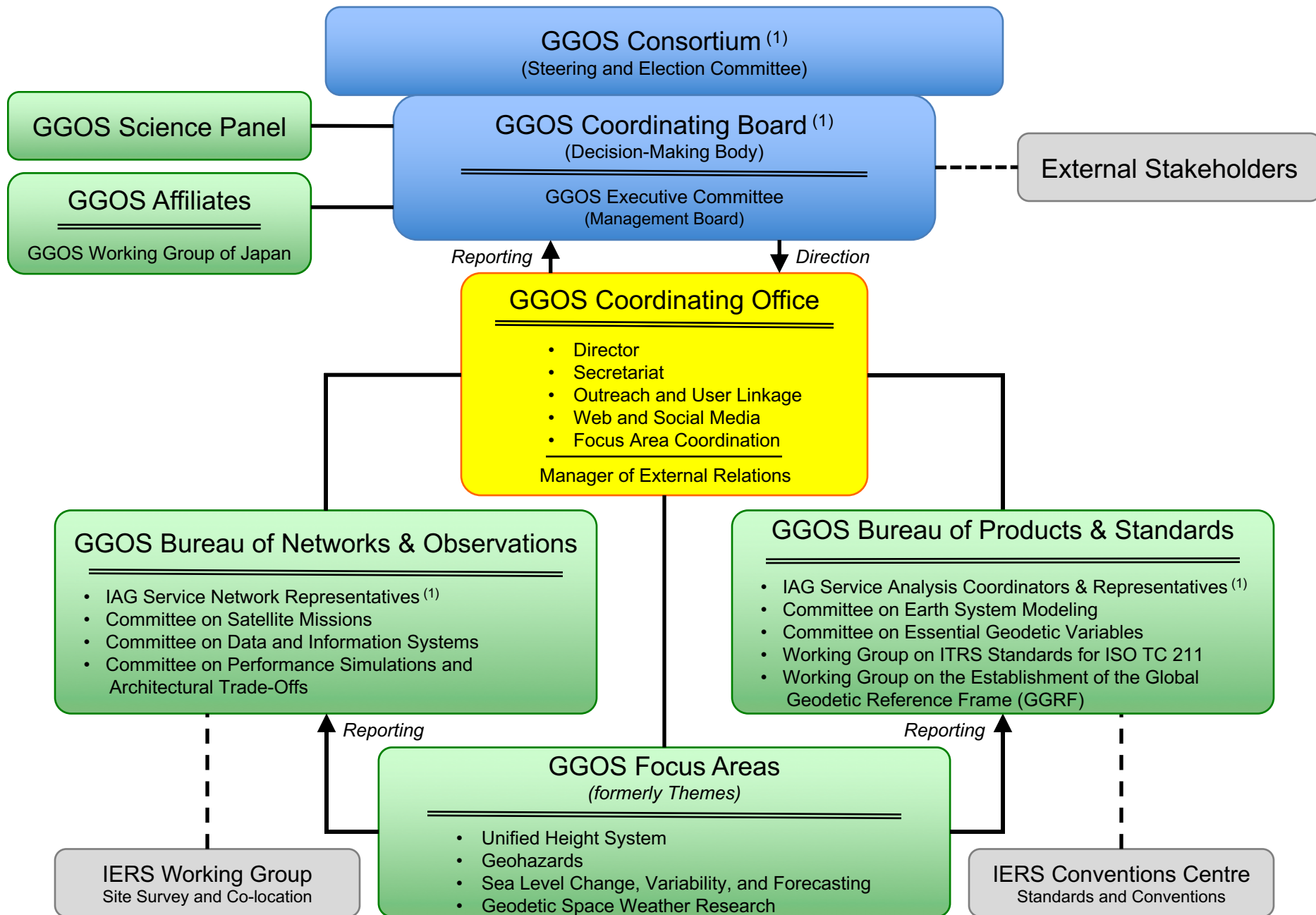
GGOS Chair Report

presented by
Richard S. Gross

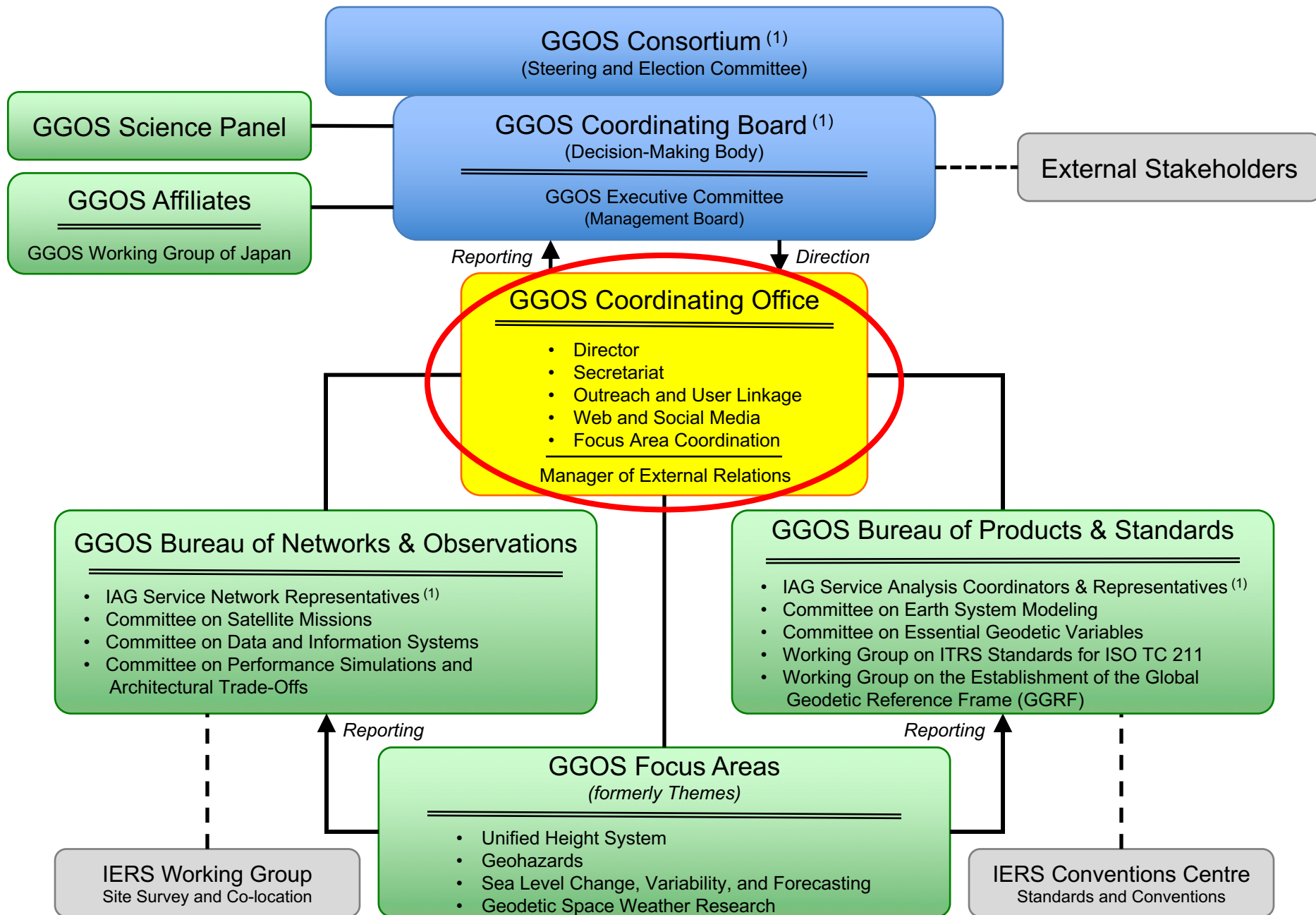
Jet Propulsion Laboratory
California Institute of Technology
Pasadena, CA 91109–8099, USA

International Association of Geodesy
Executive Committee Meeting

December 10, 2018
Washington, DC



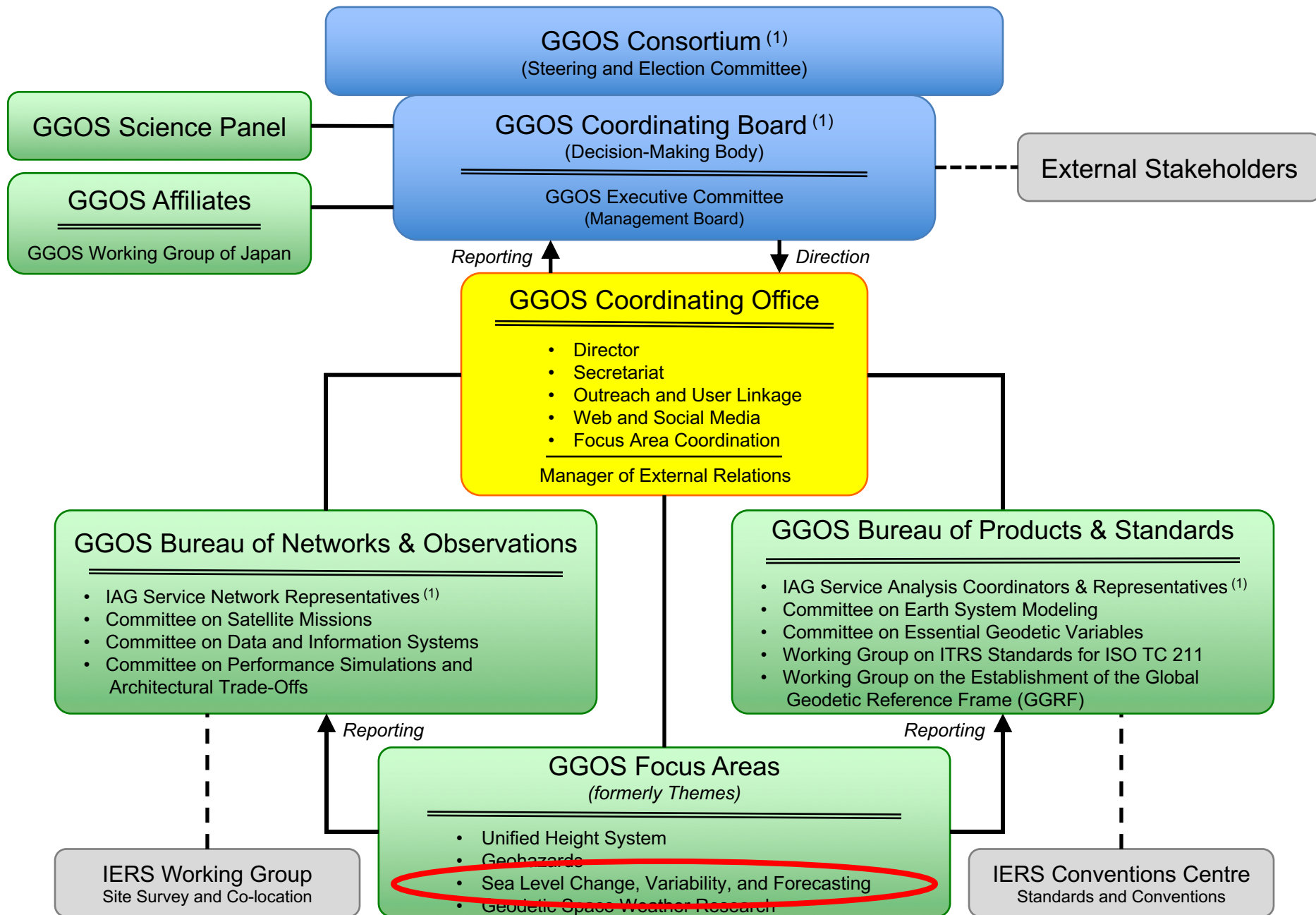
⁽¹⁾ GGOS is built upon the foundation provided by the IAG Services, Commissions, and Inter-Commission Committees



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Coordinating Office

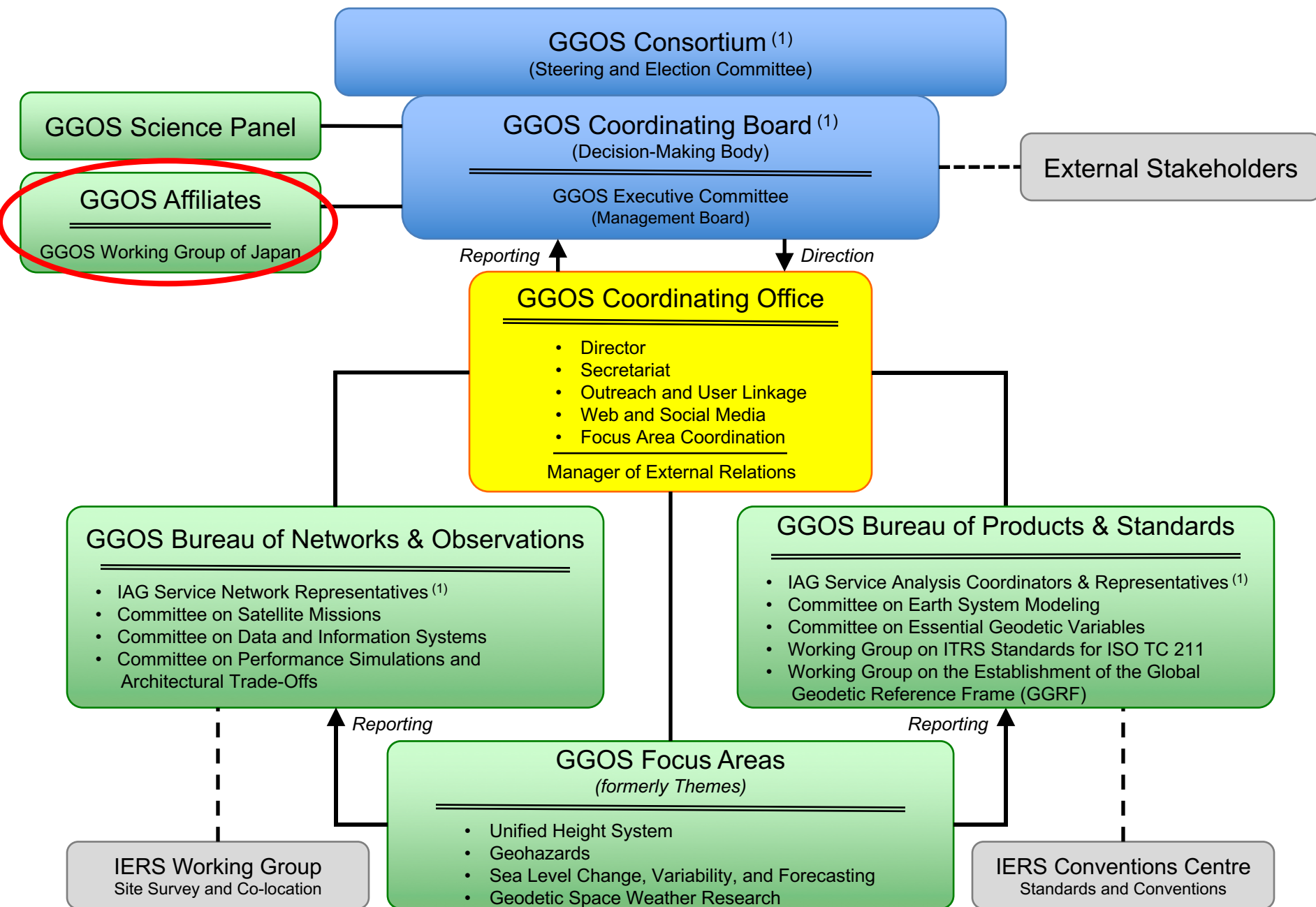
- Director of Coordinating Office
 - Matthias Madzak
 - Resigned effective October 31, 2018
 - To take position in industry
- Acting Director of Coordinating Office
 - Martin Sehnal
 - Was Matthias' assistant
- Host of Coordinating Office
 - Bundesamt für Eich- und Vermessungswesen (BEV)
 - In process of finding permanent replacement



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GGOS Focus Area on Sea Level

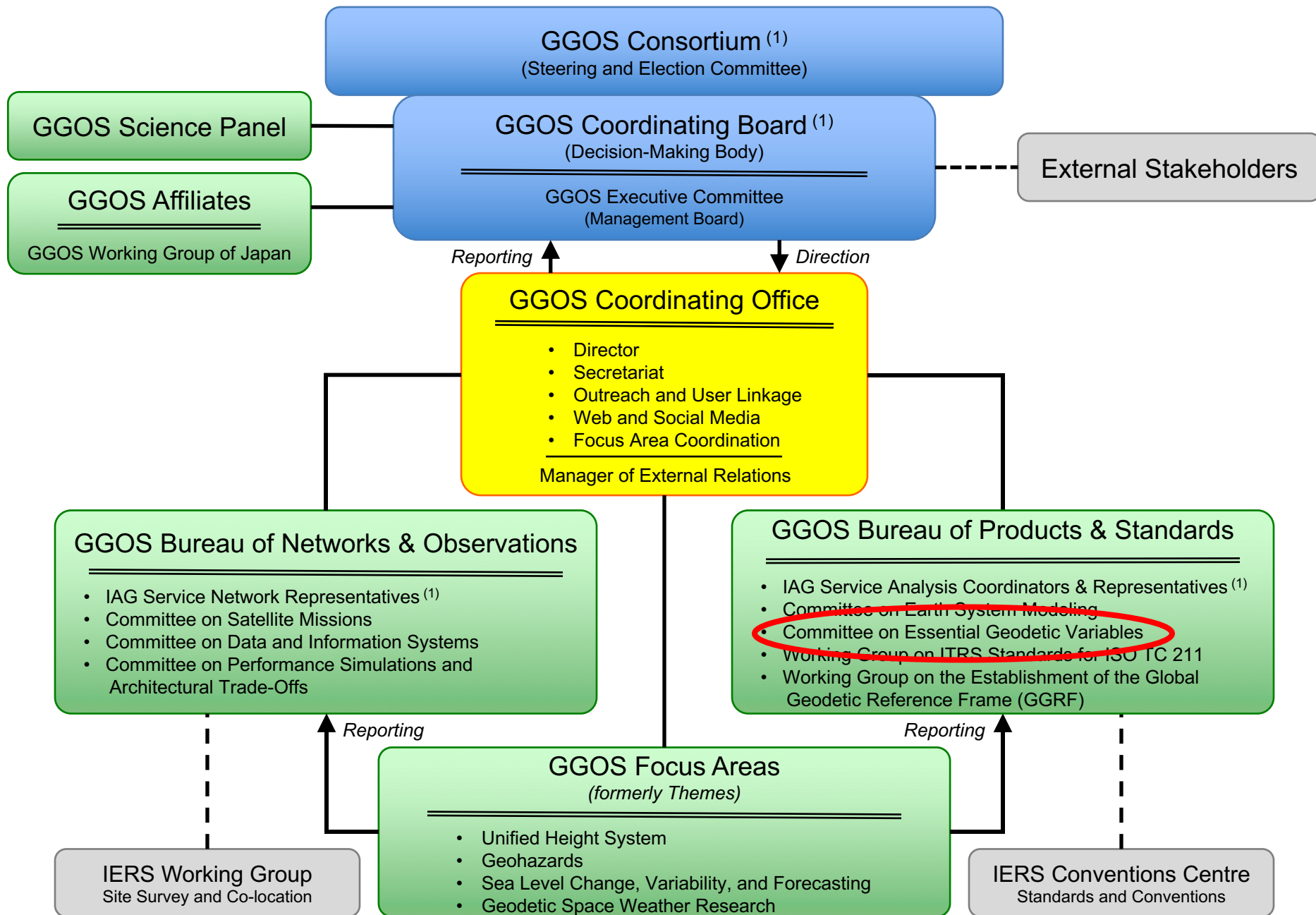
- Lead of Focus Area
 - Tilo Schöne
 - Resigned effective September 30, 2018
- Currently discussing options for continuation
 - Continue current focus
 - Liaise with sea level community
 - Redirect focus
 - Incubator for International Altimetry Service (?)



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GGOS Affiliate

- National or regional organization
 - That coordinates space-geodetic activities there
- Established to increase participation in GGOS
 - Particularly from under-represented areas
 - Africa, Asia, South and Central America
- Is a component of GGOS
 - With representation on Consortium and Coordinating Board
 - Each GGOS Affiliate has 1 representative to Consortium
 - Collectively they have 2 representatives to Coordinating Board
- First GGOS Affiliate
 - GGOS Working Group of Japan
 - Established in 2013; Chair: Toshi Otsubo of Hitotsubashi University, Japan
 - Provides forum for multi-technique, space-geodetic discussions within Japan
 - Strives to improve quality of observations & encourage collaboration in Japan
- Encourage others to become GGOS Affiliates
 - Held discussions to encourage new GGOS Affiliates
 - Spain; German (DACH?) Geodetic Commission; Nordic Geodetic Commission



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Essential Geodetic Variables

- Observed variables
 - Crucial to characterizing geodetic properties of Earth
 - Key to sustainable geodetic observations
 - Positions of reference objects (ground stations, radio sources), EOPs
 - Gravity measurements (ground-based, space-based)
- Assign requirements to each EGV
 - Accuracy, spatial and temporal resolution, latency, stability, ...
- Derive requirements
 - On EGV-dependent products (TRF, CRF, ...)
 - On infrastructure (observing systems)
- Can be used to update GGOS2020 book
 - Bottoms-up approach to deriving requirements
 - Complements top-down approach used in GGOS2020 book (user needs)
- Established Committee within GGOS BPS
 - To create list of EGVs, assign requirements to them, etc.
 - Committee includes representatives of
 - IAG Services, Commissions, Intercommission Committees, GGOS Focus Areas

Committee on EGVs

GGOS

Detlef Angermann (Germany)
Richard Gross, Chair (USA)
Harald Schuh (Germany)

GGOS Focus Area 1

(Unified Height System)
Bernhard Heck (Germany)

GGOS Focus Area 2

(Geohazards Monitoring)
Diego Melgar (USA)

GGOS Focus Area 3

(Sea Level Change)
Don Chambers (USA)

GGOS Focus Area 4

(Space Weather)
Ehsan Forootan (UK)

IAG Commission 1

Markus Rothacher (Switzerland)
Geoffrey Blewitt (USA)

IAG Commission 2

Kosuke Heki (Japan)
Thomas Gruber (Germany)

IAG Commission 3

Jianli Chen (USA)
Jose Ferrandiz (Spain)

IAG Commission 4

Jens Wickert (Germany)
Pawel Wielgosz (Poland)

IAG ICC Theory

Yoshiyuki Tanaka (Japan)
Mattia Crespi (Italy)

IERS

Tom Herring (USA)

IGS

Tom Herring (USA)
Michael Moore (Australia)

ILRS

Erricos Pavlis (USA)
Jürgen Müller (Germany)

IVS

John Gipson (USA)
Johannes Böhm (Germany)

IDS

Laurent Soudarin (France)
Jean-Michel Lemoine (France)

IGFS

Urs Marti (Switzerland)
Georgios Vergos (Greece)

BGI

Sylvain Bonvalot (France)

ICGEM

E. Sinem Ince (Germany)

ISG

Jianliang Huang (Canada)

IGETS

Hartmut Wziontek (Germany)
Jean-Paul Boy (France)

IDEMS

Christian Hirt (Germany)
Michael Kuhn (Australia)

PSMSL

Lesley Rickards (UK)

BIPM

TBD

Total: 35

DOIs for Geodetic Data

DOIs for Geodetic Data

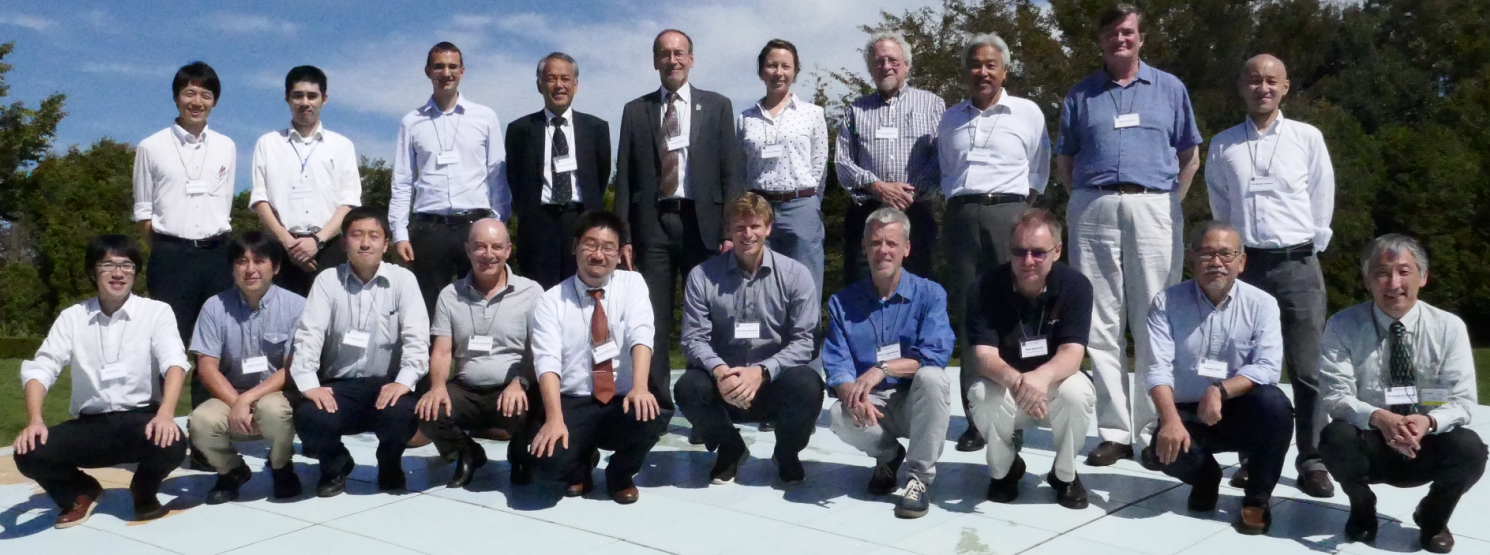
- Digital Object Identifiers (DOIs) for publications
 - Widely used by publishers
 - More than 5000 publishers participate in DOI system
 - Unique identifier of publication
 - DOI is resolved into URL where the publication can be found (landing page)
 - Landing page contains abstract of publication, PDF, etc.
 - DOI system managed by International DOI Foundation (IDF)
- DOIs for data sets
 - Benefits to users
 - Easy access to data cited in journal article – just click on DOI
 - Improves traceability of published results – eliminates confusion about data used
 - Improves discoverability of data sets – enables wider distribution of data sets
 - Benefits to data providers
 - Providers can include information about data set on landing page (metadata)
 - Easily allows number of data publications to be tracked
 - Allows number of times data is used to be counted
 - Allows data providers to receive proper credit for their published data

DOIs for Geodetic Data, cont.

- Registration agency
 - Manages DOI to URL mapping
 - Established by interested community (geodetic community)
 - Qualified by International DOI Foundation
 - Develops registration server to share among data providers
 - Registration agency assigns DOI prefix, data provider suffix: doi:prefix/suffix
- Granularity of DOI assignment
 - One data set = one DOI
 - Even if data set is updated
 - Example: IVS contribution to ITRF2014 (data set does not change)
 - Example: IGS Final combined EOPs (data set changes, but not file name)
- Establish Working Group
 - Representatives of Services, data centers
 - Establish procedures for assigning DOIs to geodetic data sets
 - Registration Agency
 - Standardized DOI naming convention
 - etc.

Meetings

GGOS Days 2018



GSI Headquarters

Tsukuba, Japan; 02–05 October 2018

Other Meetings

- **European Geosciences Union**
 - Vienna, Austria; 08–13 April 2018
 - **GGOS Session**
 - *The Global Geodetic Observing System: Reaching 1 mm*
 - Conveners: Matthias Madzak, Mike Pearlman, Richard Gross, Detlef Angermann
 - **Bureau of Products and Standards Meeting**
 - Vienna, Austria; 11 April 2018; 13:30–15:30
 - Chair: Detlef Angermann
 - **Bureau of Networks and Operations Meeting**
 - Vienna, Austria; 11 April 2018; 15:30–18:30
 - Chair: Mike Pearlman
 - **PLATO Working Group Meeting**
 - Vienna, Austria; 09 April 2018; 14:00–16:00
 - Chairs: Daniela Thaller and Benjamin Männel
- **Japan Geoscience Union**
 - Makuhari Messe, Chiba, Japan; 20–24 May 2018
 - **GGOS Session**
 - *Geodesy General Contributions & Global Geodetic Observing System*
 - Conveners: Koji Matsuo, Yusuke Yokota, Takahiro Wakasugi

Other Meetings, cont.

- ISC WDS International Program Office – NICT
 - Koganei, Tokyo, Japan; 01 October 2018
- American Geophysical Union
 - Washington, DC; 10–14 December 2018
 - GGOS Session
 - *The Global Geodetic Observing System: Essential Geodesy for Earth and Planetary Rotation*
 - Conveners: Kosuke Heki, Matthias Madzak, Richard Gross, Veronique Dehant
 - Bureau of Networks and Operations Meeting
 - Washington, DC; 10 December 2018; 9:00–12:00
 - Chair: Mike Pearlman

Future Meetings

- **European Geosciences Union**
 - Vienna, Austria; 07–12 April 2019
 - GGOS Session
 - *The Global Geodetic Observing System: Essential Variables for Geodesy*
 - Conveners: K. Heki, D. Angermann, R. Gross, M. Madzak, M. Pearlman
 - Bureau of Products and Standards Meeting
 - Chair: Detlef Angermann
 - Bureau of Networks and Operations Meeting
 - Chair: Mike Pearlman
 - PLATO Working Group Meeting
 - Chairs: Daniela Thaller and Benjamin Männel
- **International Union of Geodesy and Geophysics**
 - Montreal, Canada; 08–18 July 2019
 - GGOS Symposium
 - *Monitoring and Understanding the Dynamic Earth with Geodetic Observations*
 - Conveners: R. Gross, D. Angermann, M. Madzak, T. Otsubo
- **GGOS Days / SIRGAS**
 - Rio de Janeiro, Brazil; November 2019
- **American Geophysical Union**
 - San Francisco, CA; 09–13 December 2019

Terms-of-Reference

Revisions to Terms-of-Reference

- **Manager of External Relations**
 - Added description of Manager
 - Roles and responsibilities; selection process
- **GGOS Affiliates**
 - Added description of GGOS Affiliate
 - Representation on Consortium, Coordinating Board
- **Science Panel**
 - Added that each Focus Area nominates 1 candidate
 - Corrects omission to ToR that were approved in Prague
- **GGOS Inter-Agency Committee**
 - Removed references to GIAC which has been dissolved
 - GIAC has been effectively replaced by UN-GGIM Subcommittee on Geodesy
- **UN-GGIM Subcommittee on Geodesy**
 - Added description as fundamental supporting element of GGOS

